Local and regional development
A global production network approach

Neil M. Coe and Martin Hess

Introduction: regional development as neither ‘inside-out’, nor ‘outside-in’...

Regions have been central to the agenda of economic geography and the wider social sciences for at least twenty years now. Processes of economic globalisation – as manifested, for example, in the expansion in the scale and scope of the activities of transnational corporations (TNCs) and neo-liberally inspired inter-regional competition for investment – have focused attention on the need for regional-level interventions among a broad community of academics and policy makers. In this chapter, drawing upon the global production networks (GPN) perspective (Henderson et al., 2002) we outline a conceptual framework that seeks to delimit regional development dynamics in a globalising context. This approach focuses on the dynamic ‘strategic coupling’ of global production networks and regional assets, an interface mediated by institutional activities across different scales. Our contention is that regional development ultimately depends on the ability (or not) of this coupling to engender processes of value creation, enhancement and, most importantly, capture (Coe et al., 2004).

In so doing, we seek to connect across two by now well-established bodies of work which have offered analytical perspectives on the links between globalisation dynamics and notions of ‘regional development’. On the one hand, the so-called ‘new regionalism’ literature has placed significant emphasis on endogenous institutional structures and their capacity to ‘hold down’ global networks (for an overview, see MacLeod, 2001). For example, Amin and Thrift (1994) coined the term ‘institutional thickness’ to encapsulate the socio-cultural factors lying at the heart of economic success, a notion encompassing a strong and broad local institutional presence, a high degree of interaction among local institutions, the emergence of progressive local power structures and the development of a sense of common enterprise. In favourable circumstances, the outcome of institutional thickness is argued to be a regional economy characterised by dynamic, flexible institutions and high levels of trust and innovation.

Appealing though such concepts are, the functional connections between institutional thickness and regional development have been made far less clear. First, while institutional thickness may be a necessary condition for regional success, it is certainly not
sufficient, as evidenced by many peripheral regions with dense institutional networks and yet relatively stagnant economies. Second, the necessity of purely local institutional building may be questionable in contexts where the re-scaling of national government/governance functions is giving greater powers to regional economic institutions. In reality, regional institutional configurations are often characterised by overlapping networks of locally initiated institutions, those with powers devolved or ‘hollowed-out’ from the national state, and regional ‘branches’ of national institutions. Third, and most important here, is the need to explore more fully the interactions between extra-regional firm networks and institutional thickness, and their influence upon economic development. The critical factor for economic success is often not necessarily intense local networks, but the ability to anticipate and respond to changing external circumstances: as Amin (1999: 375) has argued, “it is the management of the region’s wider connectivity that is of prime importance, rather than its intrinsic supply-side qualities”.

On the other hand, work on inter-firm networks – such as the global commodity chain (GCC) and global value chain (GVC) approaches – has been focused on the organisational structures of global production systems and how particular regions ‘slot into’ these networks with varying impacts on the potential for industrial upgrading (Gereffi and Korzeniewicz, 1994; Gereffi et al., 2005). While analysis of the governance structures, input-output systems, territorialities and institutional frameworks of global commodity chains has no doubt made important contributions to our understanding of development processes in a globalising world, such work has received sustained criticism for some of its perceived conceptual shortcomings (e.g. Dicken et al., 2001). Most important here is the extent to which questions of spatiality and geographical scale have been integrated into GCC/GVC analyses. Arguably, due to a seeming preoccupation with the national scale, it has often had “surprisingly little to say about regional and subnational processes, because of the focus on the international dimensions of commodity chains and global divisions of labour” (Smith et al., 2002: 49). A related issue is the neglect of regional institutions in shaping processes of industrial upgrading. Whereas national and supra-national regulatory bodies have been given consideration as institutional frameworks for commodity chains, regional institutions have hardly been mentioned, although their activities may be integral to capturing the value created in particular localities.

In this chapter, we argue that neither the ‘inside-out’ nor the ‘outside-in’ perspectives offered respectively by these two strands of work is adequate in its own right: instead, regional development is best understood by working at the intersection of these two approaches. As such, it contributes to a discernible rapprochement between the two literatures over the last few years. The new regionalism literature now undoubtedly places more weight on the extra-local dynamics shaping economic growth within regions (both knowledge, capital and labour flows and also the wider institutional structures within which regions are embedded) (MacKinnon et al., 2002). Bathelt et al. (2004), for example, describe the importance of both ‘local buzz’ and ‘global knowledge pipelines’ in driving innovation and economic growth. (See also Bathelt, this volume.) Moreover, GCC/GVC studies have become increasingly concerned with how regional clusters and industrial districts are incorporated into global production systems, and the ensuing implications for local economic development and industrial upgrading (Humphrey, 2001). Local institutional formations are integral, for example, to Neilson and Pritchard’s (2009) analysis of the position of the tea and coffee industries of South India in global value chains.

Our argument develops over three further sections. Next, we explain our conceptualisation of the ‘strategic coupling’ of global
Global production networks, strategic coupling and regional development

The GPN framework offers a heuristic framework for understanding the developing geographies of the global economy. It emphasises the complex intra-, inter- and extra-firm networks that constitute all production systems, and explores how these are structured both organisationally and geographically. A GPN can be broadly defined as the globally organised nexus of interrelated functions and operations of firms and non-firm institutions through which goods and services are produced, distributed and consumed (Henderson et al., 2002). The operationalisation of the framework depends on the analysis of three interrelated variables. First, processes of value creation, enhancement and capture are scrutinised. Second, the distribution and operation of power of different forms within GPNs is considered. Third, the embeddedness of GPNs — or how they constitute and are reconstituted by the economic, social and political arrangements of the places they inhabit — is investigated.

The GPN approach can usefully be distinguished from GCC/GVC approaches in five key respects. First, through the explicit consideration of extra-firm networks, it necessarily brings into view the broad range of non-firm organisations — for example, supranational organisations, government agencies, trade unions, employer associations, NGOs, and consumer groups — that can shape firm activities in the particular locations absorbed into GPNs. Second, GPN analysis is innately multi-scalar, and considers the interactions and mutual constitution of all spatial scales from the local/regional to the global. Third, this is an avowedly network approach that seeks to move beyond the analytical limitations of the ‘chain’ notion. Production systems are seen as networked ‘meshes’ of intersecting vertical and horizontal connections in order to avoid deterministic linear interpretations of how production systems operate and generate value. Fourth, the governance characteristics of GPNs are taken to be much more complex, contingent, and variable over time than is suggested in GCC/GVC analyses. Fifth, and finally, a central concern of GPN analysis is not to consider the networks in an abstracted manner for their own sake, but to reveal the dynamic developmental impacts that result for both the firms and territories that they interconnect.

This broad approach can usefully be applied to understanding regional development in the contemporary era. Most importantly from this perspective, analytical attention must be paid to both endogenous growth factors within specific regions and also to the strategic needs of the translocal actors that...
coordinate GPNs, most notably large TNCs. Regional development can thus be conceptualised as the dynamic outcome of the complex interaction between region-specific networks and global production networks within the context of changing regional governance structures. It is the interactive effects between these two fields that contribute to regional development, not just either inherent regional advantages or the industrial structures of global industries. As a result, regional development is a highly contingent process that cannot necessarily be predicted by inventories of regional institutions or broad positions in global value chains.

In this view, endogenous factors are necessary, but not sufficient, to generate regional growth in an era in which competition is increasingly global. There is no doubt that, for development to take place, a region must benefit from economies of scale and scope derived from the local human, technological and institutional resource base; the term ‘regional assets’ can be used to describe this necessary precondition for regional development. These assets can produce two types of economies. First, economies of scale can be achieved through highly localised concentrations of specific knowledge, skills and expertise in certain industries. Second, economies of scope can exist if regions are able to reap the intangible benefits of learning and the cooperative atmosphere – sometimes known as spillover effects – that come from hosting a range of interconnected activities. However, the economies of scale and scope embedded within specific regions are only advantageous – and bring about regional development – insofar as they can complement the strategic needs of translocal actors situated within global production networks. As shown in Figure 11.1, when such complementarity exists, a strategic coupling process will take place through which the advantages of regions interact with the strategic needs of actors in GPNs. This strategic coupling process has three important characteristics: it is strategic in that it needs intentional and active intervention on the part of both institutions and inward investors to

![Diagram](image)

**Figure 11.1** Global production networks and regional development.
Source: Authors’ research
occur; it is time-space contingent as it is subject to change and is a temporary coalition; and it transcends territorial boundaries as actors from different spatial scales interact (Yeung, 2009).

The coupling process is seen to work through the processes of value creation, enhancement and capture. In GPN analysis, value is used to refer to the various forms of economic rent that can be realised through market as well as non-market transactions within production systems. Rent is created in a situation where a firm has access to scarce resources that can insulate them from competition by creating barriers to entry for competitors’ firms. Firms may be able to generate rents within GPNs in a number of ways (Kaplinsky, 2005: 62–84): from asymmetric access to key product and process technologies (technological rents), from the particular talents of their labour force (human resource rents), from particular organisational skills such as ‘just-in-time’ production techniques (organisational rents), from various inter-firm relationships involving the management of production linkages with other firms (relational rents) or from establishing brand-name prominence in major markets (brand rents). In certain sectors and circumstances additional ‘exogenous’ rents may accrue to some firms as a consequence of preferential access to natural resources (resource rents), the impacts of government policies (policy rents), the uneven availability of infrastructure (infrastructure rents) and the nature of the financial system (financial rents).

This conception of value as economic rent has two significant implications for analysing regional development. First, different forms of rent can be created and captured by actors in GPNs meaning that regions may be best served by focusing on the particular form (or forms) of rent that suits their particular configuration of labour, capital and state institutions. A region with a highly competitive labour market, an active pool of venture capitalists and a pro-growth coalition of institutions is very differently placed to one that is characterised by a weakly organised and abundant supply of labour, a virtual absence of finance capital and an unstable institutional structure. Endowed with different configurations of assets, such regions are likely to perform very different roles in terms of value creation within global production networks. Second, it should be noted that value takes on different forms across GPNs. At the time when value is created in one region, it may take a particular form, e.g. relational rent extracted from relationships with highly specialised suppliers. When this value is transferred to other regions, it may take on other forms, e.g. technological and/or brand-name rents. The potential multiplicity of rent forms indicates that the analysis of value creation and capture in regional development must go beyond simply tracking the market values of goods and services produced.

The multi-scalar institutional interface

The fact that a region is ‘plugged into’ a GPN does not automatically guarantee a positive developmental outcome because local actors may be creating forms of rent that do not maximise the region’s economic potential. Hence, regional assets can become an advantage for regional development only if they fit the strategic needs of global production networks. The process of ‘fitting’ regional assets with strategic needs of GPNs requires the presence of appropriate institutional structures that simultaneously promote regional advantages and enhance the region’s articulation into wider networks. It is crucial here that the notion of ‘regional’ institutions includes not only regionally specific institutions, but also local arms of national/supranational bodies (e.g. a trade union’s ‘local’ chapters), and extra-local institutions that affect activities within the region without necessarily having a presence (e.g. a national tax authority). These multi-scalar regional institutions
are important because they provide the ‘glue’ that ties down GPNs in particular localities.

Three dimensions of such institutional structures are crucial to regional development. The first dimension involves the creation of value through the efforts of regional institutions in attracting the location of economic activity, e.g. training and educating the local workforce, offering incentive packages, promoting start-up firms and supplier networks, facilitating venture capital formation, and encouraging entrepreneurial activities. Second, value enhancement essentially involves knowledge and technology transfer and processes of industrial upgrading. The influence of regional institutions – government agencies, trade unions, employer associations, etc. – can be especially significant here. On the one hand, regional institutions may develop specific regional assets (e.g. research capacity, supply networks, skills development) that underpin processes of upgrading for local firms. On the other hand, regional institutions may work directly with lead firms in GPNs to help them develop their value enhancement activities as part of a move towards higher quality inward investment. Over time, more value-enhancement activities may occur in these regions where lead firms are induced to bring in their core technologies and expertise. The development of sophisticated local supplier networks may also be important in enhancing the value activities of lead firms through the ‘reverse’ transfer of local knowledge and experience.

The third dimension of regional institutions in promoting regional development rests with their capacity to ensure value capture. It is one thing for value to be created and enhanced in some regions, but it may be quite another for it to be captured for the benefit of these regions. Issues of power and control are critical in the analysis of value capture. Understanding power in GPNs necessitates a move beyond ‘centred’ conceptions of power as an asset that can be accrued, towards networked or relational understandings of power (Allen, 2003). In this interpretation, power is generated through network relationships and hence varies according to the actors involved in the network, the structural and informational resources that they have at their disposal, and the effectiveness with which they are mobilised. Moreover, power structures at a given point in a network will influence and be influenced by power structures at other stages of the network. Power relations in supply networks are therefore transaction specific. A GPN can be seen as a series of exchange relationships, and variations in the power balance along the network will affect the ability of its members to capture value. Equally, any given relationship cannot be purely about power as there is always a measure of mutual interest and dependency involved. While the relationships among participants are rarely symmetrical, participants in GPNs to some degree depend on each other and work together for mutual benefit. It is not just firms that are enmeshed in these networked forms of power, but also a wide range of institutions – the state and various supra-state organisations, labour unions, trade associations, NGOs, etc. – that may also shape the structure and nature of GPNs. As a result, “GPNs resemble contested organizational fields in which actors struggle over the construction of economic relationships, governance structures, institutional rules and norms, and discursive frames” (Levy, 2008: 944). Where this is perhaps most visible is in the context of global North–South relations. While firms and industries in developing and emerging economies may experience various forms of upgrading, as numerous studies have shown (e.g. Humphrey and Schmitz, 2002; Scott, 2008), the challenge remains for regions – especially in the global South – to develop the institutional thickness necessary to ‘fit’ this upgrading with wider regional development goals (see Coe et al. (2004), for the example of BMW’s GPN in Germany and Thailand).

Arguably, the more a region is articulated into GPNs, the more likely it is to be able to reap the benefits of economies of scale and
scope in these networks, but the less likely it is able to control its own fate. A real risk in such relationships is the possibility of institutional capture, whereby the engagement between local institutions and external firms is asymmetrical, leading to the direct and indirect subsidisation of the activities of inward investors through economic development strategies that prioritise the needs of such firms at the expense of indigenous firms (Phelps, 2000). Christopherson and Clark (2007) similarly argue that the reality of power relations between GPNs and regional institutions is that TNCs are able to co-opt regional growth agendas in their favour, especially in terms of influencing regulatory policy (e.g. concerning the commercialisation of innovation), driving the research agendas of publicly supported research centres and dominating the regional labour market in terms of both skills, and pay and conditions. Importantly for these authors, such dominance does not just reflect the power of individual large firms, but also wider, systemic aspects of neoliberal market governance (e.g. engendering inter-place competition). Another risk is the possibility of institutional lock-in (Grabher, 1993) whereby regional institutions are unable to respond quickly enough to the rapidly changing demands of GPNs and as a result either become disconnected from the network or trapped in a form of strategic coupling that does not best utilise the region’s assets. This is particularly a risk in advanced economies with established institutional infrastructures.

However, in certain circumstances, regional institutions may mobilise their region-specific assets to bargain with transnational firms such that their power relations are not necessarily one-way in favour of the latter. The bargaining position of such institutions is particularly high when their region-specific assets are highly complementary to the strategic needs of transnational firms (e.g. specialised knowledge pools in the biotechnology sector). The likelihood of value capture in specific regions is generally enhanced by a cooperative set of state, labour and business institutions that offer unique combinations of region-specific assets to lead firms in GPNs. Overall, the capacity of regions to capture value is a dynamic outcome of the complex bargaining process between regional institutions and lead firms in global production networks.

What kind of regional development? Exploring the dark sides of strategic coupling

In order to make the strategic coupling of global production networks and territories work for local and regional development, it is important to bear in mind the profound power asymmetries which characterise the bargaining process that determines the location of value capture. As numerous studies have shown (see, for example, Phelps and Raines, 2003), the embedding of GPNs into regional economies is of course no guarantee of positive developmental outcomes, even if it results in new or enhanced opportunities for value capture at the local level. Indeed, depending on their position of power within a network, some local firms may benefit from their insertion into GPNs, contributing to regional economic growth and innovation, while other actors within the region may only receive marginal benefits or become excluded in the process. In other words, although the articulation of regions in global production networks can produce significant economic gains on an aggregate level, in many cases it also causes intra-regional disarticulations, for instance, through uneven resource allocation and the breakup of existing cultural, social and economic networks and systems. This ‘dark side’ of strategic coupling not only affects firms and their growth potential, but also, and maybe more importantly, the opportunities and livelihoods of people and households, and hence raises serious questions about the nature and distribution of the value generated, enhanced and captured within the region.
Figure 11.2 provides a typology and examples of the negative consequences that can and frequently do result from the connections between regional economies/territorial assets and GPNs (or lack thereof). On the one hand, it is useful to think about both significant changes in the level or existence of region-GPN connections – ruptures – as well as ongoing areas of tension and contest between different local and non-local actors – frictions. On the other hand, by distinguishing between inter- and intra-regional effects, this typology also highlights Hudson’s (2007: 1156) argument that regions need to be conceived of as both territorial and networked entities, “a product of a struggle between territorializing and de-territorializing processes”. As the concept of strategic coupling affirms, that struggle transcends territorial boundaries and involves actors at different geographical scales. In this context, it is often implicitly assumed that harmonious interests exist between ‘regional’ actors with regard to mobilising regional assets to meet the strategic needs of GPNs and thus improve regional development. In reality, however, intra-regional conflicts of interest will arise about the positive and negative impacts of globalised regional development and the appropriation of value (cf. Phelps and Waley, 2004). For development policy, this means moving beyond the primacy of what Christopherson and Clark call investment regionalism (focused on overall economic growth and value-added) to include the reduction of intra-regional inequality through distributive regionalism: “The search for ways to connect investment regionalism, centered on regional innovation systems, with distributive regionalism, centered on equity, access, and quality of life is a search for a model of sustainable economic development” (Christopherson and Clark, 2007: 148).

For the concept of strategic coupling to realise its potential (see also Coe et al., 2008), it is important to reconsider the meaning of regional development and the underlying notions of value and innovation. By defining value as various forms of rent – in addition to more conventional readings of surplus value – a GPN perspective on regions emphasises the economic dimensions of development in a way which is similar to many territorial innovation models (TIMs). In their critique of technologist and market-competition-led development concepts, Moularct and

---

**Figure 11.2** (Dis)embedding global production networks.

Source: Authors’ research
Nussbaumer (2005: 46) pointed out the dangers of a reductionist development view which largely neglects the non-economic dimensions of territorial development:

Most of the TIM models stress the instrumentality of institutions for economic restructuring and improved competitiveness of regions and localities. But none of these models makes reference to improving the non-economic dimensions and non-market-led sections of economy in localities […] According to the TIM, quality of life in local communities coincides with growing prosperity and will be produced as positive externalities of higher economic growth; no distinction is made between well-being and growth, between culture and business climate and so on.

To avoid such reductionism, strategic coupling therefore needs to adopt a more comprehensive view of what constitutes value beyond the firm and development beyond the economic (Hess, 2009).

Outside the firm and corporate networks, value is created by people and households when they try to produce their livelihoods through accessing and transforming available resources. As Bury (2008: 310; emphasis in original) argues, global players like TNCs can have significant impacts on this process:

TNC activities often affect what resources households access in the pursuit of livelihoods as well as how these resources are accessed. Thus, TNCs can affect the rules and practices governing household access to resources as well as the different resource combinations utilized to produce livelihoods.

This is not only an issue for developing economies and extractive industries, from which he draws his example, but a fundamental problem that shows the dark side of strategic coupling. As illustrated in Figure 11.2, the political exclusion of some parts of civil society, the disarticulation of existing regional economies or growing gender inequalities are just a few possible outcomes that affect value creation, capture and the production of livelihoods. Regional development policy, therefore, in addition to pursuing a more distributive form of regionalism, must also be open to the potential of strategic decoupling from some GPNs if the contribution of such global ties to value creation and capture does not outweigh the detrimental effects for the economy and society affected. It is important in this context to bear in mind that no region or locality is completely detached from the global economy, and while development in some places may be strongly linked to one specific GPN, in most cases regions are inserted into a multitude of GPNs. Any development strategy aimed at enhancing economic well-being, social justice and participation/democracy must therefore reflect decisions about which networks should be engaged with and which should be decoupled from, thereby actively shaping the regions’ positionality with respect to wider economic systems.

**Conclusion**

Local and regional development is a highly contested and political process. By forming different, temporal and multi-scalar coalitions, a multiplicity of actors struggle over the generation and distribution of value in its various forms and the ways to achieve social and economic development. GPNs and the regional contexts in which they ‘touch down’ create an open, dynamic relationship with contingent developmental outcomes, a political project based on multiple dimensions of power and agency on both sides. While some literature (cf. Levy, 2008) assumes that hegemonic power rests with global players and global structures, a GPN perspective on local
and regional development emphasises that power relationships are reciprocal, but not necessarily symmetrical or exclusively in favour of non-local actors, with local institutions and local civil society rendered powerless. This chimes with Friedman’s (2006: 428) assertion that analytical approaches should refuse “victimology and assume agency on all sides in the zones of encounter – not autonomy, or the freedom to act unimpeded by others, but rather agency, the drive to name one’s collective and individual identity and to negotiate the conditions”. What constitutes regional development and how to achieve it is at the centre of these negotiations. The concept of ‘globalising’ regional development (Coe et al., 2004) as a process of strategic (de)coupling offers a lens through which value creation, enhancement, and capture by firms, institutions and households can be analysed. Translating that analysis into concrete politics will require social innovation to produce the necessary institutional, communication and governance structures which ultimately determine local and regional, economic and social development.

Acknowledgements

Many thanks to the editors of this volume for their perceptive comments on an earlier version of the chapter. We would also like to acknowledge that this chapter draws on ideas developed jointly with Peter Dicken and Henry Yeung.

References


**Further reading**


